CLAIMS:

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1. A method of treating obesity comprising administering to an individual in need thereof a pharmaceutical composition comprising a therapeutically effective amount of a compound having any one of formulae (I) –(VI):

TeO₂ (III)

PhTeCl₃ (IV)

 $(C_6H_5)^{\dagger}P(TeCl_3(O_2C_2H_4))^{-}$ (V)

20 R_{11} — CH_2 —O O—CH— R_{12} (VI) R_{13} — CH_2 —O O—CH— R_{14}

wherein Q is Te or Se; t is 1 or 0; u is 1 or 0; v is 1 or 0; R, R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈ and R₉ are the same or different and are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1 to 5 carbons, hydroxyl, alkyl of from 1 to 5 carbon atoms, halogen, haloalkyl of 1 to 5 carbon atoms, carboxy, alkylcarbonylalkyl of 2 to 10 carbons, alkanoyloxy of 1 to 5 carbon atoms, carboxyalkyl of 1 to 5 carbon atoms, acyl, amido, cyano, amidoalkyl of 1 to 5 carbons, N-monoalkylamidoalkyl of 2 to 10 carbons, N,N-dialkylamidoalkyl of 4 to 10 carbons, cyanoalkyl of 1 to 5 carbons, alkoxy of 1 to 5 carbon atoms, alkoxyalkyl of 2 to 10 carbon atoms and -COR₁₀, wherein R₁₀ is alkyl of from 1 to 5 carbons; R₁₁, R₁₂, R₁₃ and R₁₄ are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1-5 carbons atoms, hydroxyl and alkyl of 1-5 carbons atoms; X is halogen; Y⁺ is a pharmaceutically acceptable cation.

- 2. The method of claim 1, wherein Q is Te.
- 3. The method of claim 2, wherein Y⁺ is NH₄⁺.
- 4. The method of claim 2, wherein the compound has the formula:

$$\begin{bmatrix} X & O-CH_2 \\ Te & \\ X & O-CH_2 \end{bmatrix}^{-} NH_4^{+}$$

wherein X is halogen.

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- 5. The method of claim 4, wherein the compound is ammonium trichloro(dioxoethylene-O,O')tellurate (AS101).
- 6. The method of claim 1 wherein the individual is a human subject.
- 7. The method of claim 1 wherein the individual is a non-human mammal.
 - 8. The method of claim 1 wherein the pharmaceutical composition is

administered orally, parenterally, transdermally, topically or by contacting mucous membranes.

- 9. The method of claim 8 wherein the pharmaceutical composition is administered orally in a unit dosage form selected from solutions, suspensions, capsules and tablets.
- 10. The method of claim 8 wherein the pharmaceutical composition is administered via a parenteral route selected from intramuscular, intravenous, intradermal and subcutaneous.
- 11. The method of claim 8 wherein the pharmaceutical composition is suitable for sustained or controlled release.
- 12. A method of treating obesity related disorders comprising administering to an individual in need thereof a pharmaceutical composition comprising a therapeutically effective amount of a compound having any one of formulae (I) –(VI):

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 TeO_2 (III)

PhTeCl₃ (IV)

 $(C_6H_5)^{+}P(TeCl_3(O_2C_2H_4))^{-}$ (V)

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 R_{11} — CH_2 —O—CH— R_{12} (VI) R_{13} — CH_2 —O—O—CH— R_{13}

wherein Q is Te or Se; t is 1 or 0; u is 1 or 0; v is 1 or 0; R, R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈ and R₉ are the same or different and are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1 to 5 carbons, hydroxyl, alkyl of from 1 to 5 carbon atoms, halogen, haloalkyl of 1 to 5 carbon atoms, carboxy, alkylcarbonylalkyl of 2 to 10 carbons, alkanoyloxy of 1 to 5 carbon atoms, carboxyalkyl of 1 to 5 carbon atoms, acyl, amido, cyano, amidoalkyl of 1 to 5 carbons, N-monoalkylamidoalkyl of 2 to 10 carbons, N,N-dialkylamidoalkyl of 4 to 10 carbons, cyanoalkyl of 1 to 5 carbons, alkoxy of 1 to 5 carbon atoms, alkoxyalkyl of 2 to 10 carbon atoms and -COR₁₀, wherein R₁₀ is alkyl of from 1 to 5 carbons; R₁₁, R₁₂, R₁₃ and R₁₄ are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1-5 carbons atoms, hydroxyl and alkyl of 1-5 carbons atoms; X is halogen; and Y⁺ is a pharmaceutically acceptable cation.

- 13. The method of claim 12, wherein Q is Te.
- 14. The method of claim 13, wherein Y is NH₄.

15. The method of claim 14, wherein the compound has the formula:

$$\begin{bmatrix} X & O-CH_2 \\ Te & NH_4^+ \\ X & O-CH_2 \end{bmatrix}^{-1}$$

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wherein X is halogen.

16. The method of claim 15, wherein the compound is ammonium trichloro(dioxoethylene-O,O')tellurate (AS101).

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17. The method of claim 12 wherein the obesity related disorder is selected from insulin resistance; hypertension; dyslipidemia; hyperlipidemia, cardiovascular disease; stroke; gastrointestinal disease; gastrointestinal conditions; osteoarthritis; sleep apnea and respiratory problems; and eating disorders.

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18. The method of claim 12 wherein the individual is a human subject.

20. The method of claim 12 wherein the pharmaceutical composition is administered orally, parenterally, transdermally, topically or by contacting mucous membranes.

19. The method of claim 12 wherein the individual is a non-human mammal.

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21. The method of claim 20 wherein the pharmaceutical composition is administered orally in unit dosage forms selected from solutions, suspensions, capsules and tablets.

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22. The method of claim 20 wherein the pharmaceutical composition is administered via a parenteral route selected from intramuscular, intravenous, intradermal and subcutaneous.

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23. The method of claim 20 wherein the pharmaceutical composition is suitable for sustained or controlled release.

24. A method of reducing food intake comprising administering to an individual in need thereof a pharmaceutical composition comprising a therapeutically effective amount of a compound having any one of formulae (I) –(VI):

5 $\begin{bmatrix}
R \\
O - C - R_1 \\
X \\
(R_2 - C - R_3)_t \\
(R_4 - C - R_5)_u \\
(R_6 - C - R_7)_v \\
O - C - R_8
\end{bmatrix}$ (I)

10 $X = \begin{pmatrix} O - C - R_1 \\ (R_2 - C - R_3)_t \\ (R_4 - C - R_5)_u \\ (R_6 - C - R_7)_v \\ O - C - R_8 \end{pmatrix}$ (II)

TeO₂ (III)

PhTeCl₃ (IV)

 $(C_6H_5)^{+}P(TeCl_3(O_2C_2H_4))^{-}$ (V)

 R_{11} — CH_2 —O O—CH— R_{12} (VI) R_{13} — CH_2 —O O—CH— R_{14}

wherein Q is Te or Se; t is 1 or 0; u is 1 or 0; v is 1 or 0; R, R_1 , R_2 , R_3 , R_4 , R_5 , R_6 , R_7 , R_8 and R_9 are the same or different and are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1 to 5 carbons, hydroxyl, alkyl of from 1 to 5 carbon atoms, halogen, haloalkyl of 1 to 5 carbon atoms, carboxy, alkylcarbonylalkyl of 2 to 10 carbons, alkanoyloxy of 1 to 5 carbon atoms, carboxyalkyl of 1 to 5 carbon atoms, acyl, amido, cyano, amidoalkyl of 1 to 5 carbons, N-monoalkylamidoalkyl of 2 to 10 carbons, N,N-dialkylamidoalkyl of 4 to 10 carbons, cyanoalkyl of 1 to 5 carbons, alkoxy of 1 to 5 carbon atoms, alkoxyalkyl of 2 to 10 carbon atoms and -COR₁₀, wherein R_{10} is alkyl of from 1 to 5 carbons; R_{11} , R_{12} , R_{13} and R_{14} are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1-5 carbons atoms, hydroxyl and alkyl of 1-5 carbons atoms; X is halogen; and Y⁺ is a pharmaceutically acceptable cation.

25. The method of claim 24, wherein Q is Te.

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- 26. The method of claim 25, wherein Y⁺ is NH₄⁺.
 - 27. The method of claim 26, wherein the compound has the formula:

$$\begin{bmatrix} X & O-CH_2 \\ Te & \\ X & O-CH_2 \end{bmatrix}^{-1} NH_4^{+1}$$

wherein X is halogen.

- 28. The method of claim 27, wherein the compound is ammonium trichloro(dioxoethylene-O,O')tellurate (AS101).
- 29. The method of claim 24 wherein the individual is a human subject.
- 25 30. The method of claim 24 wherein the individual is a non-human mammal.
 - 31. The method of claim 24 wherein the pharmaceutical composition is

administered orally, parenterally, transdermally, topically or by contacting mucous membranes.

- 32. The method of claim 31 wherein the pharmaceutical composition is administered orally in unit dosage forms selected from solutions, suspensions, capsules and tablets.
- 33. The method of claim 31 wherein the pharmaceutical composition is administered via a parenteral route selected from intramuscular, intravenous, intradermal and subcutaneous.
- 34. The method of claim 31 wherein the pharmaceutical composition is suitable for sustained or controlled release.
- 35. A method of alleviating a disease or disorder by reduction of food intake comprising administering to an individual in need thereof a pharmaceutical composition comprising a therapeutically effective amount of a compound having any one of formulae (I) –(VI):

$$\begin{bmatrix} R & & & & \\ & & & & \\ X & & & & \\ X - C & -R_3)_t & & & \\ X - Q & & & & \\ (R_4 - C - R_5)_u & & & \\ (R_6 - C - R_7)_v & & & \\ X & & & & \\ R_9 & & & \\ \end{bmatrix} - \qquad (I)$$

$$\begin{array}{c}
R \\
O - C - R_1 \\
(R_2 - C - R_3)_t \\
(R_4 - C - R_5)_u \\
(R_6 - C - R_7)_v \\
O - C - R_8 \\
R_9
\end{array} \tag{II}$$

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$$TeO_2$$
 (III)

$$(C_6H_5)^{\dagger}P(TeCl_3(O_2C_2H_4))^{-}$$
 (V)

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$$R_{11}$$
— CH_2 — O — CH — R_{12} (VI)
 R_{13} — CH_2 — O — O — CH — R_{14}

wherein Q is Te or Se; t is 1 or 0; u is 1 or 0; v is 1 or 0; R, R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈ and R₉ are the same or different and are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1 to 5 carbons, hydroxyl, alkyl of from 1 to 5 carbon atoms, halogen, haloalkyl of 1 to 5 carbon atoms, carboxy, alkylcarbonylalkyl of 2 to 10 carbons, alkanoyloxy of 1 to 5 carbon atoms, carboxyalkyl of 1 to 5 carbon atoms, acyl, amido, cyano, amidoalkyl of 1 to 5 carbons, N-monoalkylamidoalkyl of 2 to 10 carbons, N,N-dialkylamidoalkyl of 4 to 10 carbons, cyanoalkyl of 1 to 5 carbons, alkoxy of 1 to 5 carbon atoms, alkoxyalkyl of 2 to 10 carbon atoms and -COR₁₀, wherein R₁₀ is alkyl of from 1 to 5 carbons; ; R₁₁, R₁₂, R₁₃ and R₁₄ are independently selected from the group consisting of hydrogen, hydroxyalkyl of 1-5 carbons atoms, hydroxyl and alkyl of 1-5 carbons atoms; X is halogen and Y⁺ is a pharmaceutically acceptable cation.

- 36. The method of claim 35, wherein Q is Te.
- 37. The method of claim 36, wherein Y⁺ is NH₄⁺.

38. The method of claim 37, wherein the compound has the formula:

$$\begin{bmatrix} X & O-CH_2 \\ Te & \\ X & O-CH_2 \end{bmatrix}^{-} NH_4^{+}$$

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wherein X is halogen.

39. The method of claim 38, wherein the compound is ammonium trichloro(dioxoethylene-O,O')tellurate (AS101).

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40. The method of claim 35 wherein the disorder or disease is selected from insulin resistance: hypertension; dyslipidemia; hyperlipidemia; cardiovascular disease; stroke; gastrointestinal disease; gastrointestinal conditions; osteoarthritis; sleep apnea and respiratory problems; and eating disorders.

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41. The method of claim 35 wherein the individual is a human subject.

43. The method of claim 35 wherein the pharmaceutical composition is administered orally, parenterally, transdermally, topically or by contacting

42. The method of claim 35 wherein the individual is a non-human mammal.

mucous membranes.

44. The method of claim 43 wherein the pharmaceutical composition is administered orally in unit dosage forms selected from solutions, suspensions, capsules and tablets.

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45. The method of claim 43 wherein the pharmaceutical composition is administered via a parenteral route selected from intramuscular, intravenous, intradermal and subcutaneous.

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46. The method of claim 43 wherein the pharmaceutical composition is suitable for sustained or controlled release.